

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2000-299680

(43)Date of publication of application : 24.10.2000

(51)Int.Cl.

H04J 13/00

H04Q 7/38

H04J 11/00

(21)Application number : 2000-067095

(71)Applicant : LUCENT TECHNOLOG INC

(22)Date of filing : 10.03.2000

(72)Inventor : LAROAIA RAJIV

JUNII LEE

MICHAELA C BANDEABINI

(30)Priority

Priority number : 99 267471 Priority date : 11.03.1999 Priority country : US

## (54) METHOD AND DEVICE FOR OPERATING SPREAD SPECTRUM MULTIPLE ACCESS RADIO SYSTEM

(57)Abstract:

PROBLEM TO BE SOLVED: To improve a method for a spread spectrum multiple access cellular radio system.

SOLUTION: In the spread spectrum multiple access radio system of an orthogonal frequency division multiplex(OFDM) system, an entire band width is divided into orthogonal tones. On the side of transmission, a tone allocation unit 307 of an OFDM transmitter 301 allocates the extremely small number of orthogonal tones are allocated to the use of respective users to communicate audio information, and orthogonal tones more than the extremely small number are allocated to respective users to communicate the data information of a bit rate higher than that of audio information. Then, the allocated orthogonal tone is hopped within a usable spectrum with time by the tone allocation unit 307. Hopping of the allocated tone is performed at high speed on the downlink of the radio system but performed at low speed on the uplink and on the side of reception, similar tone allocation and tone hopping are performed as well.

